

REMARKS

The indication that claims 1-17 and 20-25 are allowed is acknowledged with thanks.

Claims 18-19, 33-34 and 36-38 were rejected as unpatentable over THANIYAVARN US2002/0025103 A1. Reconsideration and withdrawal of the rejection are respectfully requested.

These claims provide, among other features that first and second directional couplers are on sides of a phase shifter. The phase shifter has first, second and third electrodes, where the third electrode and at least one of the first and second electrodes are extended into the first and/or second directional couplers.

The Official Action acknowledges that the applied reference does not show that an electrode from the phase shifting region extends into a directional coupler, but takes the position that one of skill in the art would find it obvious to do so. The Official Action points out that the reference "teaches an electrode extending into the coupling region" and that the reference teaches "it is advantageous to locate an electrode in the coupling region in order to affect the optical signal being coupled from or into the waveguide (paragraph 57)."

However, the reference also teaches that the electrodes in the phase shifting region have a specific length L_e (paragraphs 7, 49 and 53) and that the electrodes in the

directional couplers have a specific length L_B (paragraphs 49, 59 and 65). The reference does not suggest that any other length would be appropriate or that these lengths can be extended.

Even though the reference locates an electrode in the coupling region, the electrodes in the coupling region are given specific lengths, as are the electrodes in the phase shifting region. The reference states that these are the preferred lengths and offers no alternatives. One of skill in the art reading this reference would not be motivated to change the length of any of the electrodes from that explicitly given in the reference. Accordingly, it is not believed that one of skill in the art would be motivated to extend the third electrode and at least one of the first and second electrodes into the first and/or second directional couplers, as in claims 18, 19 and 33. Thus, these claims avoid the rejection under §103.

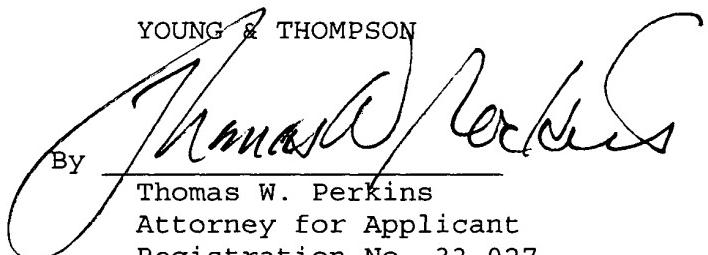
Claims 36-38 further provide that at least one of the first, second and third electrodes extends into the first and/or second directional couplers to where the optical waveguides maintain a coupling distance. This distance is more particular and may be farther than the distance defined in claims 18-19 and 33, respectively. The reference does not disclose or suggest this particular extension distance. As noted above, the reference discloses particular lengths for each of the electrodes

Application No. 10/025,776
Response dated September 12, 2003
Reply to Office Action of June 26, 2003
Docket No. 8033-1017

and makes no allowance for deviation. Accordingly, these claims are also believed to be allowable.

In view of the foregoing remarks, it is believed that the present application is in condition for allowance, which is respectfully requested.

Respectfully submitted,

YOUNG & THOMPSON

By _____
Thomas W. Perkins
Attorney for Applicant
Registration No. 33,027
745 South 23rd Street
Arlington, VA 22202
Telephone: 703/521-2297